

PDB8

**THE ROLE OF INTRAOPERATIVE PARATHYROID HORMONE MONITORING FOR PARATHYROID HYPERPLASIA**Misra S, Weber KJ, Wilhelm SM, Prinz RA

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**OBJECTIVE:** Utility of intra-operative parathyroid hormone (IOPTH) monitoring in parathyroidectomy for multi-glandular disease is less clear than for single gland disease. This study assesses the role of IOPTH monitoring during surgery for parathyroid hyperplasia. **METHODS:** From February 1999 to June 2003, 273 patients with hyperparathyroidism underwent parathyroidectomy utilizing IOPTH by a single surgeon. A prospective database revealed 44 patients with parathyroid hyperplasia. Baseline serum intact parathyroid hormone levels were drawn at initial placement of the intravenous catheter for anesthesia. Additional levels were drawn from the ipsilateral internal jugular vein after exposure of the parathyroid glands. Post-excision values were drawn at 5 and 10 minutes after the completion of parathyroidectomy. Additional values were drawn as needed to confirm an appropriate drop in IOPTH levels. IOPTH levels were compared and evaluated statistically using SPSS software. **RESULTS:** Twenty-one patients with end stage renal disease and five patients with multiple endocrine neoplasia I underwent total parathyroidectomy. The remaining 18 patients underwent subtotal parathyroidectomy. A drop in IOPTH to 35 pg/ml or to 90% of the baseline value was predictive of a successful operation in 39 patients. Five patients failed to meet these criteria. The mean final IOPTH levels in the 39 patients was 44.4 pg/ml compared to 345.2 pg/ml in the 5 patients (Mann-Whitney Test,  $p < 0.003$ ). Of the five failed patients, three were found to have ectopic parathyroid tissue in the mediastinum and two were lost to follow up. **CONCLUSION:** IOPTH levels can identify patients with sporadic hyperplasia and can guide completeness of resection for patients with known hyperplasia. However more rigid criteria are required than for adenomas. Failure to achieve appropriate decreases in IOPTH should prompt further neck exploration or a search for a mediastinal gland.

**DIABETES (including Parathyroid Disease)****DIABETES (including Parathyroid Disease)—Cost Studies**

PDB9

**POTENTIAL MEDICAL COST REDUCTION DUE TO DECREASES IN A1C RESULTING FROM PHARMACIST DIABETES EDUCATION AND MEDICATION RECOMMENDATIONS IN A COMMUNITY SETTING**Gunderson SM, Lee KY, Duvel AH, Luce DF

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**OBJECTIVES:** Research indicates that decreases in A1C from 9% to 8% reduce health-care cost differentials by \$1101 per diabetic and \$1597 per hypertensive-diabetic over a 3-year period. To combat diabetes and its related health care costs, a pharmacist-driven community-based diabetes care program was implemented in southern Texas. Both clinical and economic outcomes from this program are presented. **METHODS:** Patients with type-2 diabetes were referred to this program. Patients scheduled one to three visits, based on clinical parameters, with specially-trained pharmacists and received education, glucose-meter training and onsite laboratory testing. Data including demographics, laboratory, medical, social history and pharmacist medication recommendations were entered into a relational database (Microsoft Access®). Differential cost and annual medical

inflation rate were obtained from the literature. Program effectiveness was evaluated using a random coefficient model for continuous and GEE for binary outcomes. **RESULTS:** A total of 1795 patients were seen at first visit. 827 (46%) completed a second, and 389 (22%) completed a third visit. Of those who completed 3 visits, 369 (95%) continued to receive monitoring of A1C levels. Eighty percent of patients (297 of 369) received pharmacist education alone and had a significantly reduced average A1C from 7.37% to 7.08% ( $p < 0.0001$ ) from visit one to three. Twenty percent of the patients (72 of 369) received pharmacist diabetes education and medication recommendations and had reduced average A1C levels, 8.95% to 7.98% ( $p < 0.0001$ ) from visit one to three. Of the 72 patients, 47% were hypertensive-diabetics (systolic blood pressure  $>140$  or diastolic blood pressure  $>90$ ). Among the 34 hypertensive-diabetics and 38 non-hypertensive-diabetics, potential per-patient medical cost savings based on A1C reduction, averaged \$1280 (\$92,149), over a 3-year period. **CONCLUSIONS:** Pharmacist diabetes education and medication recommendations performed in a community setting significantly decreased A1C in type-2 diabetics resulting in a potential reduction in health care costs of \$1280 per-patient, over 3 years.

PDB10

**UTILIZATION PATTERNS OF DRUGS AND HEALTH CARE SERVICES AMONG RECIPIENTS WITH DIABETES IN A MEDICAID POPULATION**Sundaram M, Smith MJ

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Diabetes is the 7th leading chronic disease in the United States, and is responsible for substantial consumption of medical resources. Few studies have examined the distribution of the disease among patients of lower socioeconomic groups. **OBJECTIVE:** To report patterns of drug and health care utilization among people with diabetes who received Medicaid benefits. **METHODS:** Medicaid administrative claims for medical services with a primary ICD-9 code for diabetes dated during calendar year 2002 were extracted. Claims for recipients younger than 65 years of age were used for the analysis. From these claims, unique and anonymous recipient codes were collected and then used to extract prescription claims for diabetes-related medications. Reported costs were from the perspective of Medicaid. **RESULTS:** There were 14,306 recipients identified with diabetes. Among gender, ethnic, and age groups, a majority of recipients were female (63%), white (93%), and between 21 and 64 years of age (96%). The rate of diabetes was 40 per 1000 recipients. Medical services were consumed at a rate of 174 outpatient visits per 1000 recipients, 39 emergency department (ED) visits per 10,000 recipients, and 26 hospital admissions per 10,000 recipients. Costs for medical services totaled nearly \$8 million, a majority of which was for outpatient services (51%). Medicaid paid approximately \$65 per outpatient visit, \$202 per ED visit, and \$3971.41 per hospitalization related to diabetes. The cost for diabetes-related drugs and supplies equaled nearly \$7 million amounting to \$512 per recipient. A majority of the prescription claims were for insulin (34%), thiazolidinediones (25%), oral sulfonylureas (24%), and home testing supplies (11%). **CONCLUSION:** Utilization for diabetes-related medical services among a group of recipients covered by Medicaid varied by age, gender, and ethnicity. Outpatient care and prescription medications accounted for the most utilized health care resources for diabetes.